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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHANG, JON CARLTON

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/917,748	<b>Applicant(s)</b> OHARA ET AL.	
	<b>Examiner</b> Jon Chang	<b>Art Unit</b> 2623	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 9-12, 19, 21, 23 and 25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 7, 8, 14, 15, 17, 18, 22 and 24 is/are allowed.
- 6) ☒ Claim(s) 2-6, 13, 16 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/31/01</u> . | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 112***

1. Applicant's election without traverse of claims 1-8, 13-18, 20, 22 and 24 (Group I) in the reply filed on September 7, 2004, is acknowledged. Claims 9-12, 19, 21, 23 and 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

***Claim Rejections - 35 USC § 112***

2. Claims 2-6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites, "a rather expanded binary image" and "a rather blurry image". These phrases render the claim indefinite, as the term "rather" is either subjective or indicates a degree of something, the degree being uncertain within the context of the claim. The term is not given a definite meaning in the detailed description portion of the specification, so the metes and bounds of the patent protection desired is uncertain. In particular, if the application were to mature into a patent, a potential infringer would not know to what extent a binary image would need to be expanded or an image made blurry, to be "rather expanded" or "rather blurry". Claims 3, 5 and 6 recite one or both of these phrases. Claim 4 depends from claim 3.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 20 is drawn to a signal, which is non-statutory. The rest of the claim is merely an intended use of the signal, and does not limit the claim to a particular application.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,903,316 to Hongo et al. (hereinafter "Hongo").

Regarding claim 16, Hongo discloses an image processing apparatus, comprising:

a determination device determining whether a target pixel is a background based on complexity of a pattern in a vicinal area of a target pixel in local binarization of a multiple-valued image (column 2, lines 19-25; Fig.1, elements 6-12);

a binarization device performing the local binarization based on a determination result of said determination device (column 3, lines 45-46; column 4, lines 40-43; Fig.1, element 17); and

an output device outputting a process result of said binarization device (Fig.1, output of element 17; a device is implied, e.g.).

7. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,153,925 to Tanioka et al. (hereinafter "Tanioka").

As to claim 13, Tanioka discloses an image processing apparatus, comprising:

a first binarization device performing a local binarization on a multiple-valued image (column 2, lines 19-21; column 3, lines 24-26; Fig.1A, element 200);

a second binarization device performing local binarization again on a pixel regarded as a white pixel in a vicinal area of a target pixel when the target pixel is regarded as a white pixel in the local binarization by said first binarization device column 2, lines 22-23; column 3, lines 27-29; Fig.1A, element 201; note that the selection unit 202 in Fig.1A selects between the two binarization devices, column 3, lines 29-31, implying that the second binarization device always performs binarization, thus meeting the limitation. Further, note in Figs.4A-4H that under certain conditions the pixel will be

regarded as white, prior to binarization of the second binarization device, again meeting the limitation); and

an output device outputting a process result of said second binarization device (Fig.1A, element 300).

8. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,633,406 to Imaizumi et al. (hereinafter "Imaizumi").

As to claim 13, Imaizumi discloses an image processing apparatus, comprising:  
a first binarization device performing a local binarization on a multiple-valued image (column 3, lines 24-26; Fig.1);

a second binarization device performing local binarization again on a pixel regarded as a white pixel in a vicinal area of a target pixel when the target pixel is regarded as a white pixel in the local binarization by said first binarization device (column 3, lines 28-31; Fig.1; note that the Imaizumi's second binarization device always performs a second binarization, although with a different threshold, and therefore will perform it on a pixel regarded as a white pixel in a vicinal area of a target pixel when the target pixel is regarded as white pixel in the local binarization by said first binarization device); and

an output device outputting a process result of said second binarization device (e.g., Fig.1, printing unit).

***Subject Matter Not Found in the Prior Art***

9. The subject matter of claim 20 has not been found in the prior art. However, allowability cannot be indicated because the claim is not directed to statutory subject matter.

***Allowable Subject Matter***

10. Claims 1, 7, 8, 14-15, 17-18, 22 and 24 are allowed.

11. Claims 2-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***References Cited***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,200,841 to Kotaki et al. discloses an apparatus for binarizing images which utilizes two binarizing circuits.

U.S. Patent 5,898,795 to Bessho discloses a character recognition method which uses a method for deleting ruled lines.

U.S. Patent 5,995,665 to Maeda teaches a binarizer which first determines whether a pixel of interest is background.

U.S. Patent 6,141,444 to Hasegawa discloses a method for deleting ruled lines.


U.S. Patent Application Publication 20010021279 to Nakajima et al. teaches a region extracting means which extracts ruled lines, among other things.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jon Chang  
Primary Examiner  
Art Unit 2623

Jon Chang  
January 10, 2005